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03/07/2007 02:20 PM

To Christopher Lichens/R9/USEPA/US@EPA
cc edm@demaximis.com, "Chamberlin, David" <ChamberlinDC@cdm.com>, tperina@ch2m.com
bcc
Subject Addendum to SVE Pilot Testing TM

History: This message has been forwarded.

Hi Chris - the attached addendum provides details regarding the additional SVE pilot testing discussed during the February 27th meeting. If you have any questions, please feel free to call.

Regards,

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<<OmegaSVE_Addendum_Mar7_07.pdf>> OmegaSVE_Addendum_Mar7_07.pdf

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Memorandum

To: *Chris Lichens - USEPA*

From: *Dave Chamberlin - CDM*
John Eisenbeis - CDM

Date: *March 7, 2007*

Subject: *Addendum to February 5, 2007 Technical Memorandum*
Soil Vapor Extraction Pilot Test
Omega Chemical Superfund Site
10500-37240-T2.OSS.SVEOP

As discussed at the February 27, 2007 technical meeting among U.S. Environmental Protection Agency (USEPA) and Omega Chemical Site Potentially Responsible Party Organized Group (OPOG) representatives in San Francisco, this memorandum is intended to describe limited additional components to be included in the second phase of the soil vapor extraction (SVE) pilot test at the Omega site. Specifically, Section 9.0 of the subject February 5, 2007 Technical Memorandum (TM) proposed the installation and testing of four new shallow (screened approximately 10 to 30 feet below ground surface [bgs]) SVE wells, to be located in the northwest quadrant of the site. Data collected prior to and during the initial pilot test conducted in the fall of 2006 indicate that the vadose zone can be divided into three generalized stratigraphic horizons – relatively permeable material from the ground surface to approximately 30 feet bgs referred to as the shallow vadose zone; a relatively lower permeability zone of approximately 4 to 11 feet in thickness (referred to as "the 30-foot unit"); and the remaining vadose zone between the 30-foot unit and groundwater, referred to as the deep vadose zone. This memorandum proposes the installation of three vapor monitoring probes, two in the deep vadose zone below the 30-foot unit, and one within the 30-foot unit. The draft RI report describes a lower conductivity interbed in the middle of the 30-foot unit which likely consists of higher permeability siltier materials. Installation of the vapor monitoring probe within the 30-foot unit will target the lower permeability materials.

Objectives

The primary objective of the three vapor monitoring probes noted above is to determine if there is pneumatic communication across the 30-foot unit.

Furthermore, restarting of the pilot test with the additional new wells would be performed to meet the following additional objectives:

1. Collect sufficient temporal extraction data to determine if trends in influent volatile organic compound (VOC) concentrations should be expected as a result of vapor migration and/or desorption of contaminant mass, and

2. Collect sufficient temporal extraction data to determine if seasonal trends in potential vapor extraction rates should be expected.

These objectives are in addition to those enumerated in the first paragraph of Section 9.0 of the February 5, 2007 TM, and elaborated on in the remainder of that section.

Scope of Work

In addition to the wells described in the February 5, 2007 TM, OPOG proposes to install two 1-inch diameter vapor monitoring probes in the deeper vadose zone that would be screened from approximately 35 to 45 feet bgs. Also, one 1-inch diameter vapor monitoring probe is proposed to be screened within the 30-foot unit itself. Owing to the limited thickness of the 30-foot unit, this latter probe would likely have a screened section of one foot in length.

The deeper vapor monitoring probes are proposed in addition to the overlying shallow vadose zone wells to determine the degree of vertical vapor transmission across the 30-foot unit. The 1-inch-diameter vapor monitoring probes proposed are for pressure monitoring purposes only.

The locations of the proposed three additional vapor monitoring probes are shown on Figure 1. As shown, the probes are proposed for the middle of the Omega property, and will be situated adjacent to existing shallow SVE wells.

Schedule

OPOG will implement installation of all new wells (four shallow) and vapor monitoring probes (two deep and one in the 30-foot unit) within two weeks of approval by USEPA. All new wells and vapor monitoring probes should be installed within approximately one week. The restarted pilot test would then commence within approximately one week of installation.

The specific duration of the restarted pilot test cannot be determined at this time. However, in order to achieve the objectives noted above, OPOG expects that the pilot test will be conducted for a duration of three to six months.

Legend

- Omega Chemical Superfund Site
- Building
- Property Boundary
- Soil Vapor Extraction Well
- Proposed Shallow SVE Well Locations
- Proposed Vapor Monitoring Probe Below the 30 Foot Unit
- Proposed Vapor Monitoring Probe In the 30 Foot Unit

0 15 30 60
Feet

CDM

Omega Chemical Super Fund Site
Location of Proposed Additional SVE Wells and Vapor Monitoring Probes
Figure 1